

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	PREV ABR LLC	11/27/2012
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	SYNTHETIC BIOLOGICS, INC.	
<b>Street Address:</b>	155 GIBBS STREET	
<b>City:</b>	ROCKVILLE	
<b>State/Country:</b>	MARYLAND	
<b>Postal Code:</b>	20850	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	14517539
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>		
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>		
<b>Phone:</b>	2023736000	
<b>Email:</b>	ipdocket@bingham.com, ellen.paul@bingham.com	
<b>Correspondent Name:</b>	BINGHAM MCCUTCHEN LLP	
<b>Address Line 1:</b>	2020 K STREET NW	
<b>Address Line 4:</b>	WASHINGTON, D.C. 20006-1806	
<b>ATTORNEY DOCKET NUMBER:</b>	SYN-003C2	
<b>NAME OF SUBMITTER:</b>	STEPHEN L. ALTIERI	
<b>SIGNATURE:</b>	/Stephen L. Altieri/	
<b>DATE SIGNED:</b>	10/24/2014	
<b>Total Attachments: 3</b>		
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## ASSIGNMENT

PREV ABR LLC with offices at 7272 Wisconsin Avenue, Suite 300, Bethesda, Maryland 20814, the undersigned, for good and valuable consideration, the receipt of which is hereby acknowledged, confirm that we have freely assigned, and do hereby freely assign, and transfer to **SYNTHETIC BIOLOGICS, INC.**, a corporation, with offices at 617 Detroit Street, Ann Arbor, Michigan 48104, and its successors, assigns and legal representatives, all hereinafter referred to as the ASSIGNEES: (1) our entire right, title and interest for the United States and in all countries, in and to any and all inventions, discoveries and applications which are disclosed in the applications listed in "Schedule A", including any subsequently filed applications, which claim priority to, and benefit of, the applications listed on "Schedule A", including any renewals, revivals, reissues, reexaminations, extensions, continuations and divisions thereof and any substitute applications therefore; (2) the full and complete right to file patent applications in the name of the ASSIGNEE, its designee, or in my name as the ASSIGNEE, or its designee's election, on the aforesaid inventions, discoveries and applications in all countries of the world; (3) the entire right, title and interest in and to any Letters Patent which may issue thereon in the United States or in any country, and any renewals, revivals, reissues, reexaminations and extensions thereof, and any patents of confirmation, registration and importation of the same; and (4) the entire right, title and interest in all Convention and Treaty Rights of all kinds thereon, including without limitation all rights of priority in any country of the world, in and to the above inventions, discoveries and applications.

We hereby authorize and request the competent authorities to grant and to issue any and all such Letters Patent in the United States and throughout the world to the ASSIGNEES of the entire right, title and interest therein, as fully and entirely as the same would have been held and enjoyed by me/us had this assignment, sale and transfer not been made.

We agree, at any time, upon the request of the ASSIGNEES, to execute and to deliver to the ASSIGNEES any additional applications for patents for said inventions and discoveries, or any part or parts thereof, and any applications for patents of confirmation, registration and importation based on any Letters Patent issuing on said inventions, discoveries, or applications and divisions, continuations, renewals, revivals, reissues, reexaminations and extensions thereof.

We further agree at any time to execute and to deliver upon request of the ASSIGNEES such additional documents, if any, as are necessary or desirable to secure patent protection on said inventions, discoveries and applications throughout all countries of the world, and otherwise to do the necessary to give full effect to and to perfect the rights of the ASSIGNEES under this Assignment, including the execution, delivery and procurement of any and all further documents evidencing this assignment, transfer and sale as may be necessary or desirable.

We hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

We further covenant that ASSIGNEES will, upon its request, be provided promptly with all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR and will testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute and deliver to ASSIGNEES or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

Date: November 27, 2012

R. Michael Segal  
Signature of:  
On Behalf of: PREV ABR LLC

State of Maryland  
County of Anne Arundel

On this 27<sup>th</sup> day of November, 2012, before me, the undersigned notary public, personally appeared Robert M. Floyd proved to me through satisfactory evidence of identification, which was a MD Driver's License to be the person whose name is signed on this document and who swore or affirmed to me that the contents of this document are truthful and accurate to the best of his/her knowledge and belief.

[Signature]  
Notary Public

My commission expires June 2, 2014

## Schedule A

Country	Date of Filing	Application No.	Status	Patent No.	Expiry Date
EP	24-May-2010	FI20105572	Lapsed		
PCT	17-May-2011	PCT/FI2011/050450	WO partly positive		May-31
Country	Date of Filing	Application No.	Status	Patent No.	Expiry Date
FI	21-June-2006	20065431	Granted	FI119190	21-June-26
PCT	21-Jun-2007	PCT/FI2007/050372	WO positive		21 Jun 2026 FI
National filings	21-Dec-2008				
Country	Date of Filing	Application No.	Status	Patent No.	Expiry Date
FI	28-Nov-2006	20065757	Granted	FI119678	28-Dec-26
PCT	21-Nov-2007	PCT7FI2007/05062	WO positive		28 Dec 2028
National Filings	28-May-2009				
Country	Date of Filing	Application No.	Status	Patent No.	Expiry Date
FI	6-Nov-2001	20012143	Granted	FI112666	11-June-21
EP	3-May-2004	02774801.1-2	Pending		11-May-22
US	5-May-2004	10/494,411	Granted	US2005/015884	1-Oct-24